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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,254	01/16/2001	Pierre Lelong	FR 000003	5188

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

MILLER, MARTIN E

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,254

Applicant(s)

LELONG ET AL.

Examiner

Martin Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claims 6-11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Information Disclosure Statement

2. The examiner has considered the IDS filed April 26, 2001 and an initialed copy is included with this office action.

Drawings

3. The Examiner has found the drawings, filed January 16, 2001, acceptable

Specification

4. The abstract of the disclosure is objected to because of the extra words "Figs.: 2A,2B" which appear at the end of the abstract. Correction is required. See MPEP § 608.01(b).

Priority

5. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by aubin et al., (hereinafter Aubin), "Morphometric evaluations of personalized #D reconstructions and

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geometric models of the human spine", Medical & Biological Engineering & Computing, November 1997.

As per claim 1, Aubin teaches:

steps of acquisition of a first view (postero-anterior) of part of the spine, and a second view (Lateral), of the same part of the spine taken from a different angle around the longitudinal axis of the spine (e.g. figure 3), matching the dimensions of the views from two predetermined corresponding landmarks (fig. 2) on each view and deriving three-dimensional coordinates of corresponding points along the spine (p. 613, col. 1, paragraphs 1-3).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aubin as applied to claim 1 above, and further in view of Andre et al., (hereinafter Andre), "Approach of the smoothing of three-dimensional reconstructions of the human spine using dual Kriging interpolation", Medical & Biological Engineering & Computing, May 1996.

As per claim 2, Aubin does not specifically teach drawing a line on the spine in each view, however, Andre teaches:

wherein, for matching the two views, an axial line is drawn (fig. 4 and then iteratively, curve fitted to the landmarks points) and the two landmarks (marked T1-T12 or L1-L5) are set set on said axial line on each view (again see fig. 4).

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It would have been obvious to one of ordinary skill in the art to use the axial line drawn by Andre, which is then used to align the landmarks in each image, as a reference for the geometric transformations used by Aubin to minimize errors and to perform specific calculations to better interpolate differences in the image landmark data.

As per claim 3, Aubin teaches:

wherein matching of the dimensions of the two views is performed by a calculating matching coordinates for the two corresponding landmarks. (p. 613, col. 1, 2nd paragraph beginning, "The coordinates...")

As per claim 4, Aubin teaches:

wherein a common system of coordinates is determined for the two views from the matched coordinates of the two corresponding landmarks (p. 613, col. 1, paragraph 3).

As per claim 5, Aubin does not teach providing a smoothed axial line. However, Andre teaches:

wherein spline calculation is performed for providing smoothed axial line on each view (fig. 1, p. 186, col. 1, section 1.2, second paragraph). It would have been obvious to one of ordinary skill in the art to use the smoothed line data of Andre in the system of Aubin to limit the number of spurious image signals so that a truer landmark point could be found to increase accuracy and reliability.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following U.S. patent(s) refer(s) to matching fiducial marks for common reference in anatomical images: 6434415, 5623560, 5531227, 54803960, and 4920573.

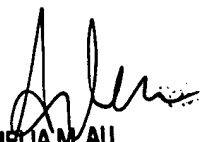
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Miller whose telephone number is (703) 306-9134. The examiner can normally be reached on Monday-Friday, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

WAM
mem
9-29-03


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